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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,937	08/27/2001	Rui M. Amorin	D/A0941 (1508/3320)	8656

7590 02/06/2008

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EXAMINER	
AILES, BENJAMIN A	

ART UNIT	PAPER NUMBER
2142	

MAIL DATE	DELIVERY MODE
02/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

MN

Office Action Summary	Application No.	Applicant(s)	
	09/939,937	AMORIN ET AL.	
	Examiner	Art Unit	
	Benjamin A. Ailes	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 31-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 31-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to correspondence filed 20 December 2007.

2. Claims 1-18 and 31-36 remain pending.

Oath/Declaration

3. The new oath submitted 20 December 2007 has been accepted. The objection to the oath has been withdrawn.

Drawings

4. Applicant's arguments, see Remarks, filed 20 December 2007, with respect to the objection to the drawings have been fully considered and are persuasive. The objection of the drawings has been withdrawn.

Claim Rejections - 35 USC § 112

5. Applicant's amendment to claim 13 has been entered into the record and overcome the previous rejection set forth under 35 USC 112, second paragraph. The rejection has therefore been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 6, 7, 12, 13, 18, 31, 32 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Stapleton et al. (U.S. 6,523,070), hereinafter referred to as Stapleton, in view of Poulter et al. (US 6,603,741 B1), hereinafter referred to as Poulter.

8. Regarding claim 1, Stapleton teaches a method for identifying one of a plurality of communication channels available for communication between one of a plurality of devices and a server, wherein the plurality of communication channels are formable between the server and cascadedly arranged controllers, each controller associated with one of the devices, including n inputs, n > 1, and a switching device configured to allow connection between one of the n inputs and the associated device and connection through the controller between the remaining n -1 inputs and n-1 outputs, and the n inputs of each succeeding controller in the cascade are respectively connected to n outputs of a preceding one of the controllers (Fig. 2, col. 3, ll. 11-15), the method comprising:

monitoring, at each of the cascadely arranged controllers, each of the plurality of communication channels between the controller and the server (fig. 2 and fig. 4, col. 4, ll. 14-24, connection establishment by devices through downstream or upstream connectors);

Stapleton does teach of monitoring the status of the channels but does not explicitly teach the monitoring of the channels for link pulses wherein the presence of link pulses on one of the communication channels indicates that that particular communication channel are not currently being used for data transmission by the server and is available and providing the establishment of the connection channel. However,

in related art, Poulter teaches on a link pulse exchange method wherein link pulses are used to establish a connection negotiate between for example a device and a server (col. 4, ll. 40-46). Through the negotiation process two network devices are able to monitor each other by way of the link pulses and complete an auto-negotiation process. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize link pulses as taught by Poulter in combination with the channel selection method as taught by Stapleton. One of ordinary skill in the art would have been motivated to make such a combination wherein Stapleton teaches the need to change communication channels often (col. 5, ll. 3-15) and Poulter teaches that through the link pulse exchange the highest common mode can be negotiated (col. 4, ll. 49-51).

9. Regarding claim 6, Stapleton and Poulter teach the method further comprising providing an indication of which of the plurality of communication channels was the established communication channel for the associated device (Stapleton, col. 3, ll. 18-21).

10. Regarding claim 7, Stapleton teaches a method for identifying one of a plurality of communication channels available for communication between one of a plurality of devices and a server, wherein the plurality of communication channels are formable between the server and cascadedly arranged controllers, each controller associated with one of the devices, including n inputs, n > 1, and a switching device configured to allow connection between one of the n inputs and the associated device and connection through the controller between the remaining n -1 inputs and n-1 outputs, and the n

inputs of each succeeding controller in the cascade are respectively connected to n outputs of a preceding one of the controllers (Fig. 2, col. 3, ll. 11-15), the method comprising:

monitoring, at each of the cascadely arranged controllers, each of the plurality of communication channels between the controller and the server (fig. 2 and fig. 4, col. 4, ll. 14-24, connection establishment by devices through downstream or upstream connectors);

Stapleton does teach of monitoring the status of the channels but does not explicitly teach the monitoring of the channels for link pulses wherein the presence of link pulses on one of the communication channels indicates that that particular communication channel are not currently being used for data transmission by the server and is available and providing the establishment of the connection channel. However, in related art, Poulter teaches on a link pulse exchange method wherein link pulses are used to establish a connection negotiate between for example a device and a server (col. 4, ll. 40-46). Through the negotiation process two network devices are able to monitor each other by way of the link pulses and complete an auto-negotiation process. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize link pulses as taught by Poulter in combination with the channel selection method as taught by Stapleton. One of ordinary skill in the art would have been motivated to make such a combination wherein Stapleton teaches the need to change communication channels often (col. 5, ll. 3-15) and Poulter teaches that

through the link pulse exchange the highest common mode can be negotiated (col. 4, ll. 49-51).

11. Regarding claim 12, Stapleton and Poulter teach the method further comprising providing an indication of which of the plurality of communication channels was the established communication channel for the associated device (Stapleton, col. 3, ll. 18-21).

12. Regarding claim 13, Stapleton teaches a method for identifying one of a plurality of communication channels available for communication between one of a plurality of devices and a server, wherein the plurality of communication channels are formable between the server and cascadedly arranged controllers, each controller associated with one of the devices, including n inputs, n > 1, and a switching device configured to allow connection between one of the n inputs and the associated device and connection through the controller between the remaining n -1 inputs and n-1 outputs, and the n inputs of each succeeding controller in the cascade are respectively connected to n outputs of a preceding one of the controllers (Fig. 2, col. 3, ll. 11-15), the method comprising:

monitoring, at each of the cascadely arranged controllers, each of the plurality of communication channels between the controller and the server (fig. 2 and fig. 4, col. 4, ll. 14-24, connection establishment by devices through downstream or upstream connectors);

Stapleton does teach of monitoring the status of the channels but does not explicitly teach the monitoring of the channels for link pulses wherein the presence of link pulses on one of the communication channels indicates that that particular communication channel are not currently being used for data transmission by the server and is available and providing the establishment of the connection channel. However, in related art, Poulter teaches on a link pulse exchange method wherein link pulses are used to establish a connection negotiate between for example a device and a server (col. 4, ll. 40-46). Through the negotiation process two network devices are able to

monitor each other by way of the link pulses and complete an auto-negotiation process. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize link pulses as taught by Poulter in combination with the channel selection method as taught by Stapleton. One of ordinary skill in the art would have been motivated to make such a combination wherein Stapleton teaches the need to change communication channels often (col. 5, ll. 3-15) and Poulter teaches that through the link pulse exchange the highest common mode can be negotiated (col. 4, ll. 49-51).

13. Regarding claim 18, Stapleton and Poulter teach the method further comprising providing an indication of which of the plurality of communication channels was the established communication channel for the associated device (Stapleton, col. 3, ll. 18-21).

14. Regarding claims 31, 32 and 33, Stapleton and Poulter teach the method wherein said monitoring is performed for each of the associated devices, more than one of the associated devices are simultaneously connectable to different ones of the server ports determined to be available, and the communication channel of one of said simultaneously connected devices is formed through one of the inputs and outputs of a preceding one of the controllers in cascade (Stapleton, fig. 2 and fig. 4, col. 4, ll. 14-24, connection establishment by devices through downstream or upstream connectors).

15. Claims 2-5, 8-11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stapleton and Poulter in view of Allmond et al. (US 5,754,552), hereinafter referred to as Allmond.

16. Regarding claim 2, Stapleton and Poulter do not expressly teach that the monitoring further comprises monitoring one of the plurality of communication channels at a time for the one or more link pulses. However, Allmond teaches that it is well known that a plurality of communication channels can be monitored for link pulses in a mutually-exclusive manner, or one at a time (column 6, lines 56-57). Stapleton, Poulter and Allmond are analogous art because they are from the same field of endeavor of networking data devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Stapleton and Poulter by allowing only one communication channel to be monitored at a time, as taught by Allmond. One of ordinary skill in the art would have been motivated for doing this is to sequentially monitor the communication channels. Therefore it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of sequential monitoring to obtain the invention as specified in claim 2.

17. Regarding claim 3, Stapleton and Poulter do not explicitly teach that the monitoring further comprises disabling the other of the plurality of communication channels while the one of the plurality of communication channels is monitored for the one or more link pulses. Allmond teaches that it is well known in the art that communication channels other than the one being monitored can be disabled (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to disable Stapleton's unmonitored communication channels, as taught by Allmond. The motivation for doing so would have been to prevent potential interference from the unmonitored signals. Therefore, it would have been obvious to

combine Allmond with Stapleton and Poulter for the benefit of interference prevention to obtain the invention as specified in claim 3.

18. Claims 9 and 15 contain similar subject matter and are rejected under the same rationale as claim 3.

19. Regarding claim 4, Stapleton and Poulter do not explicitly teach that the monitoring of one of the plurality of communication channels is conducted by two or more devices. Allmond teaches that it is well known in the art that one communication channel can be monitored by two devices (figure 1, items 124 and 128). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow one of Stapleton's communication channels to be monitored by two or more devices. The motivation for doing so would have been to allow more than one device to utilize the connection on that particular communication channel. Therefore, it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of connection utilization to obtain the invention as specified in claim 4.

20. Regarding claim 5, Stapleton and Poulter do not explicitly teach that the method further comprises blocking the communication channel monitored to have the link pulses for the one device from the other devices. Allmond teaches that it is well known that the communication channel monitored to have the link pulses for a particular device can be blocked from other devices (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow Stapleton's devices that aren't receiving link pulses to be blocked from the communication channel carrying the pulses to another device. The motivation for doing so would have been to

only allow the intended device to receive the pulses. Therefore, it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 5.

21. Regarding claim 8, Stapleton and Poulter do not expressly teach that the monitoring further comprises monitoring one of the plurality of communication channels at a time for the one or more link pulses. However, Allmond teaches that it is well known that a plurality of communication channels can be monitored for link pulses in a mutually-exclusive manner, or one at a time (column 6, lines 56-57). Stapleton, Poulter and Allmond are analogous art because they are from the same field of endeavor of networking data devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify Stapleton and Poulter by allowing only one communication channel to be monitored at a time, as taught by Allmond. One of ordinary skill in the art would have been motivated for doing this is to sequentially monitor the communication channels. Therefore it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of sequential monitoring to obtain the invention as specified in claim 8.

22. Regarding claim 10, Stapleton and Poulter do not explicitly teach that the monitoring of one of the plurality of communication channels is conducted by two or more devices. Allmond teaches that it is well known in the art that one communication channel can be monitored by two devices (figure 1, items 124 and 128). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow one of Stapleton's communication channels to be monitored by two or more

devices. The motivation for doing so would have been to allow more than one device to utilize the connection on that particular communication channel. Therefore, it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of connection utilization to obtain the invention as specified in claim 10.

23. Regarding claim 11, Stapleton and Poulter do not explicitly teach that the method further comprises blocking the communication channel monitored to have the link pulses for the one device from the other devices. Allmond teaches that it is well known that the communication channel monitored to have the link pulses for a particular device can be blocked from other devices (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow Stapleton's devices that aren't receiving link pulses to be blocked from the communication channel carrying the pulses to another device. The motivation for doing so would have been to only allow the intended device to receive the pulses. Therefore, it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 5.

24. Regarding claim 14, Stapleton and Poulter do not expressly teach that the monitoring further comprises monitoring one of the plurality of communication channels at a time for the one or more link pulses. However, Allmond teaches that it is well known that a plurality of communication channels can be monitored for link pulses in a mutually-exclusive manner, or one at a time (column 6, lines 56-57). Stapleton, Poulter and Allmond are analogous art because they are from the same field of endeavor of networking data devices. It would have been obvious to one of ordinary skill in the art at

the time of the applicant's invention to modify Stapleton and Poulter by allowing only one communication channel to be monitored at a time, as taught by Allmond. One of ordinary skill in the art would have been motivated for doing this is to sequentially monitor the communication channels. Therefore it would have been obvious to combine Allmond with Stapleton and Poulter for the benefit of sequential monitoring to obtain the invention as specified in claim 14.

25. Claims 16, 34-36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stapleton and Poulter in view of Patel et al. (U.S. 5,883,894), hereinafter referred to as Patel.

26. Regarding claim 16, Stapleton and Poulter do not explicitly teach that each of the devices has one of the monitoring systems. Patel teaches that is it is well known that it is possible for each port to have an auto-negotiation system, which performs port monitoring (col. 4, lines 32-34). Stapleton and Poulter and Patel are analogous art because they are both from the same field of endeavor of network devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide each of Stapleton's devices with a monitoring system, as taught by Patel. The motivation for doing so would have been to allow each of the devices to monitor the plurality of communication channels. Therefore, it would have been obvious to combine Patel with Bennett for the benefit of allowing each device to monitor communication channels to obtain the invention as specified in claim 16.

27. Regarding claims 34-36, Stapleton and Poulter do not explicitly disclose that each of the devices has one of the monitoring systems. Patel teaches that is it is well

known that it is possible for each port to have an auto-negotiation system, which performs port monitoring (col. 4, lines 32-34). Stapleton and Poulter are analogous art because they are both from the same field of endeavor of network devices. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide each of Stapleton's devices with a monitoring system, as taught by Patel. The motivation for doing so would have been to allow each of the devices to monitor the plurality of communication channels. Therefore, it would have been obvious to combine Patel with Stapleton and Poulter for the benefit of allowing each device to monitor communication channels to obtain the invention.

28. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stapleton, Poulter and Patel in view of Allmond.

29. Regarding claim 17, Stapleton, Poulter and Patel do not explicitly disclose that the system further comprises a blocking system that blocks the communication channel monitored to have the link pulses for the one device from the other devices. Allmond teaches that it is well known that the communication channel monitored to have the link pulses for a particular device can be blocked from the other devices (col. 6, lines 59-63). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to allow Stapleton's devices that are not receiving link pulses to be blocked from the communication channel carrying the pulses to another device. The motivation for doing so would have been to only allow the intended device to receive the pulses. Therefore, it would have been obvious to combine Allmond with Stapleton and

Poulter and Patel for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 17.

Response to Arguments

Applicant's arguments filed 20 December 2007 have been fully considered but they are not persuasive. Applicant argues with respect to claims 1, 7 and 13 that Stapleton nor Poulter disclose the claimed features of "a plurality of communication channels available for communication between one of a plurality of devices and a server, wherein the plurality of communication channels are formable between the server and cascadedly arranged controllers, each controller associated with one of the devices, including n inputs, n > 1, and a switching device configured to allow connection between one of the n inputs and the associated device and connection through the controller between the remaining n -1 inputs and n-1 outputs, the method comprising: monitoring, at each of the cascadedly arranged controllers, each of the plurality of communication channels between the controller and the server, wherein the n inputs of each succeeding controller in the cascade are respectively connected to n outputs of a preceding one of the controllers." The examiner respectfully disagrees with the applicant. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The applicant has failed to address the rejection with respect to what is taught by the combination set forth in the rejection of Poulter with Stapleton. In view of the

rejection, Stapleton teaches in figure 2 and column 3, lines 11-15 the plurality of communication channels formable between the server and cascadedly arranged controllers, each controller associated with one of the devices, including n inputs, n > 1, and a switching device configured to allow connection between one of the n inputs and the associated device and connection through the controller between the remaining n -1 inputs and n-1 outputs, and the n inputs of each succeeding controller in the cascade are respectively connected to n outputs of a preceding one of the controllers wherein connections are formed within and between devices through connected cables and further a plurality of signals are carried between devices in order to enable communication between the devices to provide normal functionality. Poulter is relied upon for teaching in column 4, lines 40-46 the aspect of a link pulse exchange method wherein link pulses are used to establish a connection negotiate between for example a device and a server. Through the negotiation process two network devices are able to monitor each other by way of the link pulses and complete an auto-negotiation process. The combination of Poulter with Stapleton is deemed sufficient because Stapleton teaches in column 5, lines 3-15 the need to change communication channels often and Poulter teaches in column 4, lines 49-51 that through the link pulse exchange the highest common mode can be negotiated. Therefore, it is maintained by the examiner that the cited prior art of Stapleton and Poulter teaches that which is claimed in claims 1, 7 and 13. Claims 2-6, 8-12, 14-18 and 31-36 are not deemed patentable over the cited prior art for the same reasons as set forth above.

Conclusion

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

baa

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER